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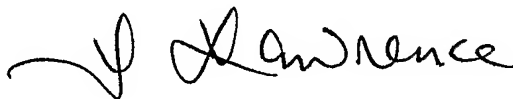
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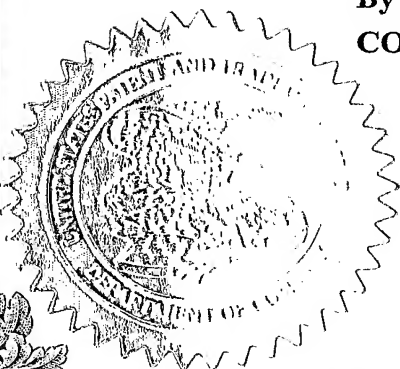
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16698 U.S. PTO

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This is a request for filing a PROVISIONAL APPLICATION FOR PATENT under 37 CFR 1.53(c).

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60/557381

033004

INVENTOR(S)					
Given Name (first and middle [if any])	Family Name or Surname	Residence (City and either State or Foreign Country)			
GUY	FLEISHMAN	ISRAEL			
<input checked="" type="checkbox"/> Additional inventors are being named on the _____ separately numbered sheets attached hereto					
TITLE OF THE INVENTION (500 characters max)					
<b>METHOD and SYSTEM FOR COMPRESSING, STORAGE            AND RECONSTRUCTION OF SPEECH WITH REDUCED STORAGE VOLUME.</b>					
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ENCLOSED APPLICATION PARTS (check all that apply)					
<input checked="" type="checkbox"/> Specification Number of Pages <span style="border: 1px solid black; display: inline-block; width: 40px; text-align: center;">2</span>		<input type="checkbox"/> CD(s), Number <span style="border: 1px solid black; display: inline-block; width: 60px; height: 20px; vertical-align: middle;"></span>			
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<input checked="" type="checkbox"/> No.					
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Respectfully submitted,

SIGNATURE

JNC'SD

TYPED or PRINTED NAME

GUY FLEISHMAN

TELEPHONE

972-3-5566233

Date

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**Method and System for compressing, storage and reconstruction of speech with reduced storage volume.**

Introduction

The invention provides system, apparatus, and method for compressing a audio and speech signal, storage and reconstruction of quality speech with minimal storage volume or transmission bandwidth requirements.

At present there are a several kinds of systems that are proposed for speech compressing and recording. From one side there are apparatus with a big memory size and powerful and not cheap processors (For example Flash Disk used as managers tape). Those systems have large memory and can store big files of speech data. The disadvantage of those systems is relatively high price. From the other side there are relatively cheap and simple systems that used for recording short speech or audio (1 minute) and can't save big files. The invention enables to save long time speech recordings in a relatively small memory size. The invention implements relatively simple and cheap system and method to convert, compress, store and reconstruct speech signals. The invention can be used in variety of applications like blessing speaking cards, blind cards, tape recorders, voice mail, baby toys and others...

Description

This invention provide an improved technique for reducing the storage volume for the audio data. This invention provide a compression scheme for audio data which reduces the storage requirement of the data. This invention provide a low cost solution for storage and reproduction of the audio data. The invention based on system that include two hardware devices and software algorithm. The objects of the invention are system and method that converts audio signal to digital representation, saves the results in memory and enables simple reproduction of audio signal on user demand. The invention uses new method to transform speech to the digital data. This is done without measuring and preserving the amplitude of the harmonies of the analog signals.

The system is implemented by following description but other options like ASIC or different hardware and software blocks are also possible. For example one implementation of the system build of two hardware parts:

1. Microphone part
2. Memory part

The Microphone part consist of:

- a. Microphone
- b. Amplifier
- c. Comparator
- d. Auxiliary hardware

The microphone transforms audio to analog signal which is amplified with amplifier and pass comparator that transforms the signal to the impulse form.

The Memory part consist of:

- a. micro controller
- b. memory
- c. amplifier with filter
- d. speaker
- e. additional hardware

Most of this part (except speaker circuit) can be implemented in digital ASIC. Special software algorithm is used to implement the method and control the system.

The impulse signal from the Microphone part transferred to the micro controller circuit where it is sampled at a defined rate (about 8-10 kb per second). The samples are recorded in memory by using serial memory protocol. This method enables speech of one second be occupy only 8-10 kb or one Kbytes of memory. Compared to basic speech digital conversion technique that uses 64 kbit per second or 8 Kbytes of memory per second. At the reproduction when the power switched on the Memory part, it begin to work in the reproduction mode. With the same sample frequency the converted audio data from the memory entered to the micro controller circuit and outputted to the amplifier and filter circuit. The output is transformed to the analog signal for the audio reproduction in the speaker.

The scope of this invention include different implementations and applications and not limited only to the given examples.